



For 3-Wire Floating or Proportional Control of 15 to 200 mm Globe Valves

General

The MVL Series valve actuators are designed for 3-wire floating / on-off, proportional voltage / current control for 2-way and 3-way globe valves from 15 to 100 mm. All units are equipped with a manual override device.

The MVL Series actuator features a reversible synchronous motor with an integral magnetic clutch to eliminate the need for position switches and enhance the overall reliability of the actuator. Position feedback for MVL46 from a 0 - 1000 Ω potentiometer is available as an option (ordered separately) while position feedback signal of 0 - 10 VDC or 0 - 200 μ A is available on MVL56 as a standard feature. An auxiliary switch is also available as an accessory (ordered separately).

Installation

The thermostat or controller to be used should be selected or adjusted to complement the stroke time of the MVL Series actuator.

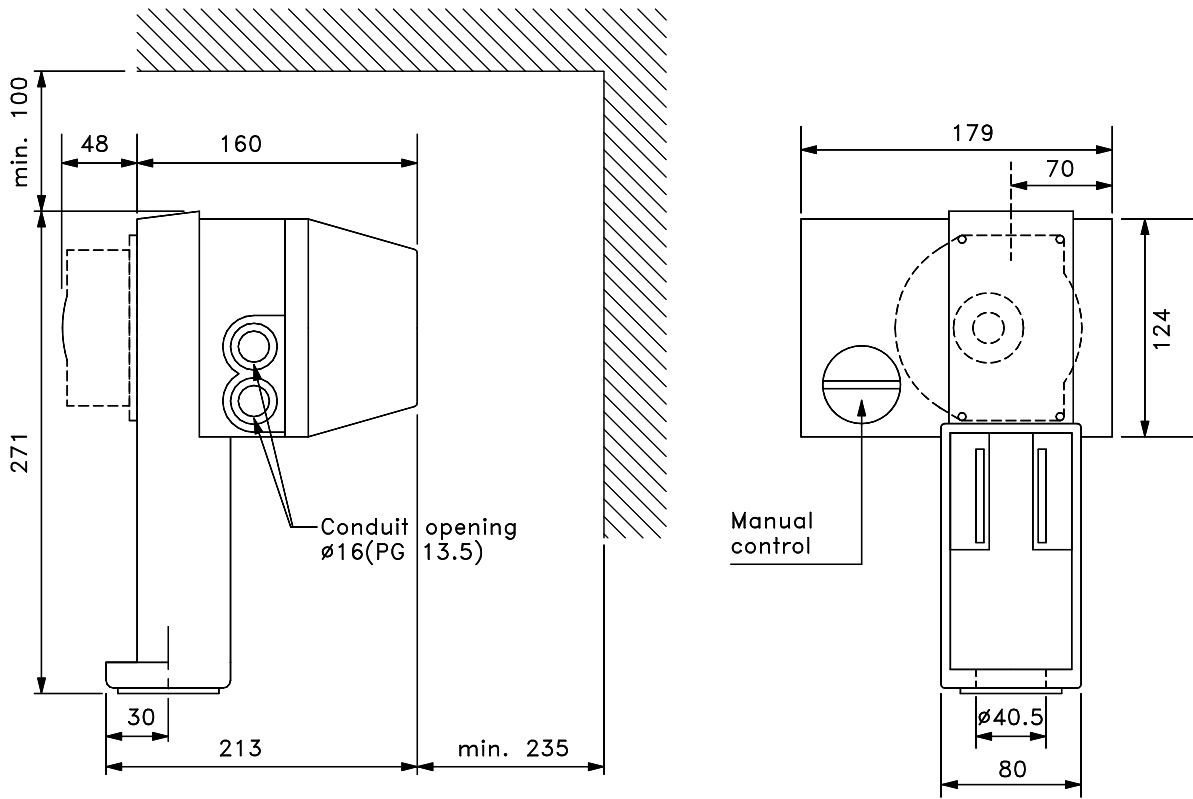
For ease of installation, the MVL Series actuator mounts directly onto an globe valve in minutes, without the need for time consuming field calibration of its stroke or span. For mounting MVL Series actuator onto a VSB Series valve, mounting kit A31 (ordered separately) is required.



Field Selection

For best control results, the MVL56 actuator can be controlled by virtually any proportional voltage or current input. The circuit board allows the user to select one of seven different operating ranges, as well as the direction of stroke.

VALVE ACTUATOR MVL



Dimension in mm

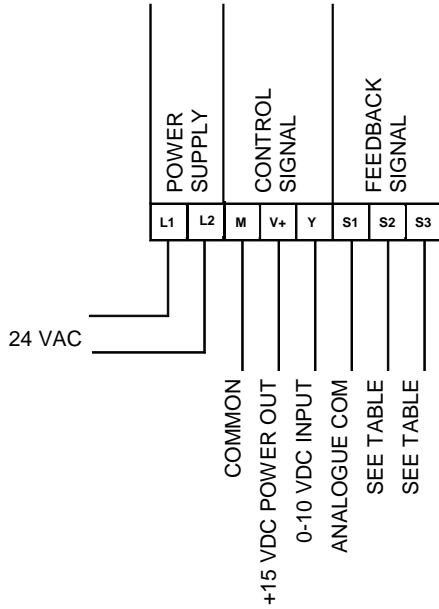
Specifications

| | | |
|--------------------------|---|--|
| Model Numbers | MVL46, MVL46A/C | MVL56, MVL56A/C |
| Control Signal | 3-Wire Floating (Incremental) or on/off | (6-9,0-10,1-5,2-10,4-7,8-11) VDC 4-20 mA |
| Input Impedance | N/A | 100 k Ω |
| Feedback Signal | 0 –1000 Ω potentiometer | 0-10 VDC or 0-20 μ A |
| Power Supply | 24 VAC (+15%, -10%), 50/60 Hz | |
| Power consumption | 12 VA | |
| Stroke Time | 1.33(1.11) s/mm | 0.97(0.80) s/mm spring return |
| Maximum Stroke | 45 mm | |
| Close-off Force | 1500 N (100 lbf) | |
| Ambient Operating Limits | -15... 50 °C RH 80% | |
| Agency Approval | CE Mark Compliant | |
| Shipping Weight | 3.0 kg (6.6 lbs) | |

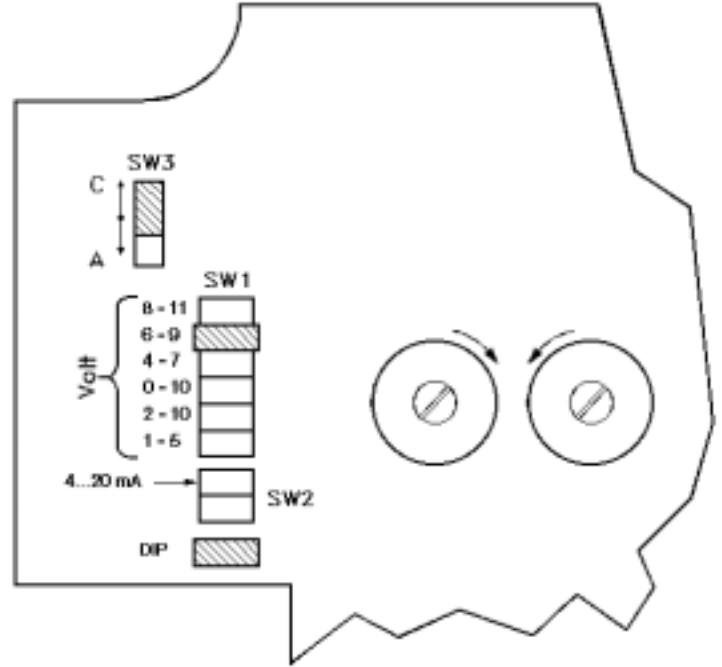
*Actuators with spring return. When there is no power supply, valve stem is up with A suffix and valve stem is down with C suffix.

| Feedback | Voltage output | | Current output | |
|-----------|----------------|------|----------------|-------------|
| Terminals | S2&M | S3&M | S2&S1 | S3&S1 |
| Stem up | 10 V | 0 V | 200 μ A | 0 μ A |
| Stem down | 0 V | 10 V | 0 μ A | 200 μ A |

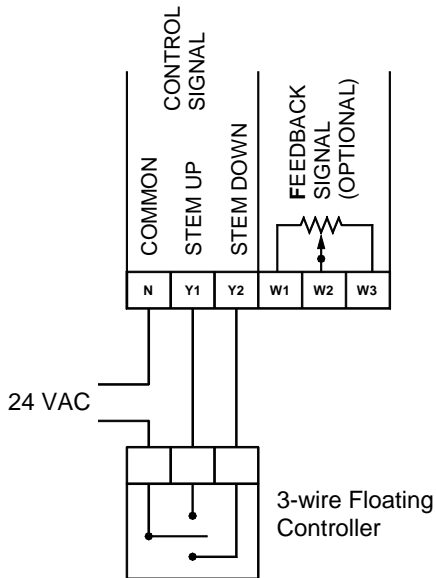
(L2 and M are internally con-



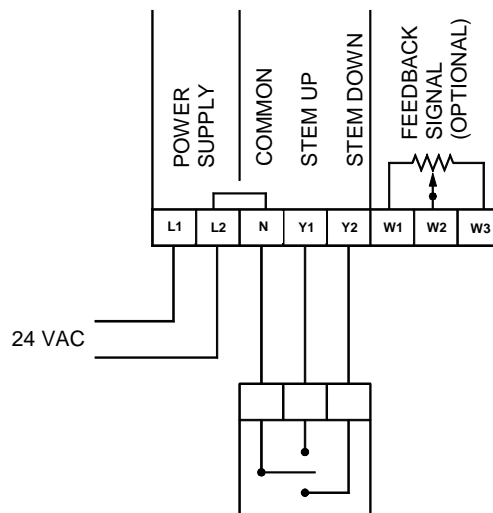
MVB56 Wiring Diagram



MVL56 circuit board diagram



MVL46 Wiring Diagram



MVL46A/C Wiring Diagram

NOTE

To change the control action to reverse, reposition jumper SW3 to "A" position. The control operating range can also be changed by repositioning jumper SW1 to the desired operating range. For 4-20 mA control application, the jumpers on SW1 must be moved to SW2.